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Amendment and/or Response
Reply to Office action of 16 April 2004

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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. A method for training a self ordering map for use in a computing system, comprising the steps of:

initializing a set of weights of athe self[-]ordering map; and

iteratively training saidthe weights over many training epochs;

wherein

for at least a number of saidthe training epochs, saidstepof iteratively training includingthe weights includes

updating saidthe weights based on a learning rate that is generated according to a function that changes in a fashion that is other than monotonically a decreasing value with the training epochs.

2. A method as in claim 1, wherein saidstepof iteratively training includes updating said weights basedon a learning rate that is generated according to a the function includes a random or pseudorandom function.

3. A method as in claim 2 wherein saidstepof iteratively training includes updating said weights basedon a learning rate that is generated according to a function that is such that values over which said learning rate may the random or pseudorandom function has a range that decreases with the training epochs.

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4. A method as in claim 2 wherein ~~said step of iteratively training includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said~~

the random or pseudorandom function is configured such that the learning rate tends to decrease with the training epochs.

5. A method as in claim 1 wherein ~~said step of iteratively training includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said learning rate may~~

the function has a range that decreases with the training epochs.

6. A method as in claim 5 wherein ~~said step of iteratively training includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said~~

the function is configured such that the learning rate tends to decrease with the training epochs.

7. A method as in claim 1 wherein ~~said step of iteratively training includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said~~

the function is configured such that the learning rate tends to decrease with the training epochs.

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8. A method of training a self ordering feature map for use in a computing system, comprising the steps of:

choosing a random value for initial weight vectors;

drawing a sample from a set of training sample vectors and applying it to input nodes of said the self ordering feature map;

identifying a winning competition node of said the self ordering feature map according to a least distance criterion;

adjusting a synaptic weight of at least said the winning node, using:

— said step of adjusting including selecting a value for a learning rate used to update
said the synaptic weight that is based on a function other than one that is monotonic with subsequent training epochs;

iteratively repeating said steps of the drawing, identifying, and adjusting to form each subsequent training epoch.

9. A method as in claim 8, wherein said step of adjusting includes updating said weights based on a learning rate that is generated according to

the function corresponds to a random or pseudorandom function.

10. A method as in claim 9 wherein said step of adjusting includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said learning rate may

the function has a range that decreases with subsequent training epochs.

11. A method as in claim 9 wherein said step of adjusting includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said

the function is configured such that the learning rate tends to decrease with subsequent training epochs.

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12. A method as in claim 8 whercin said step of adjusting includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said learning rate may

the function has a range that decreases with subsequent training epochs.

13. A method as in claim 12 whercin said step of adjusting includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said

the function is configured such that the learning rate tends to decrease with subsequent training epochs.

14. A method as in claim 8 whercin said step of adjusting includes updating said weights based on a learning rate that is generated according to a function that is such that values over which said

the function is configured such that the learning rate tends to decrease with subsequent training epochs.

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